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Why Prairies Matter and Lawns Don't

(Plus, What the Prairie Teaches Us)

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Prairies – those critically endangered and complex ecosystems understood by few and misunderstood and destroyed by millions of people.

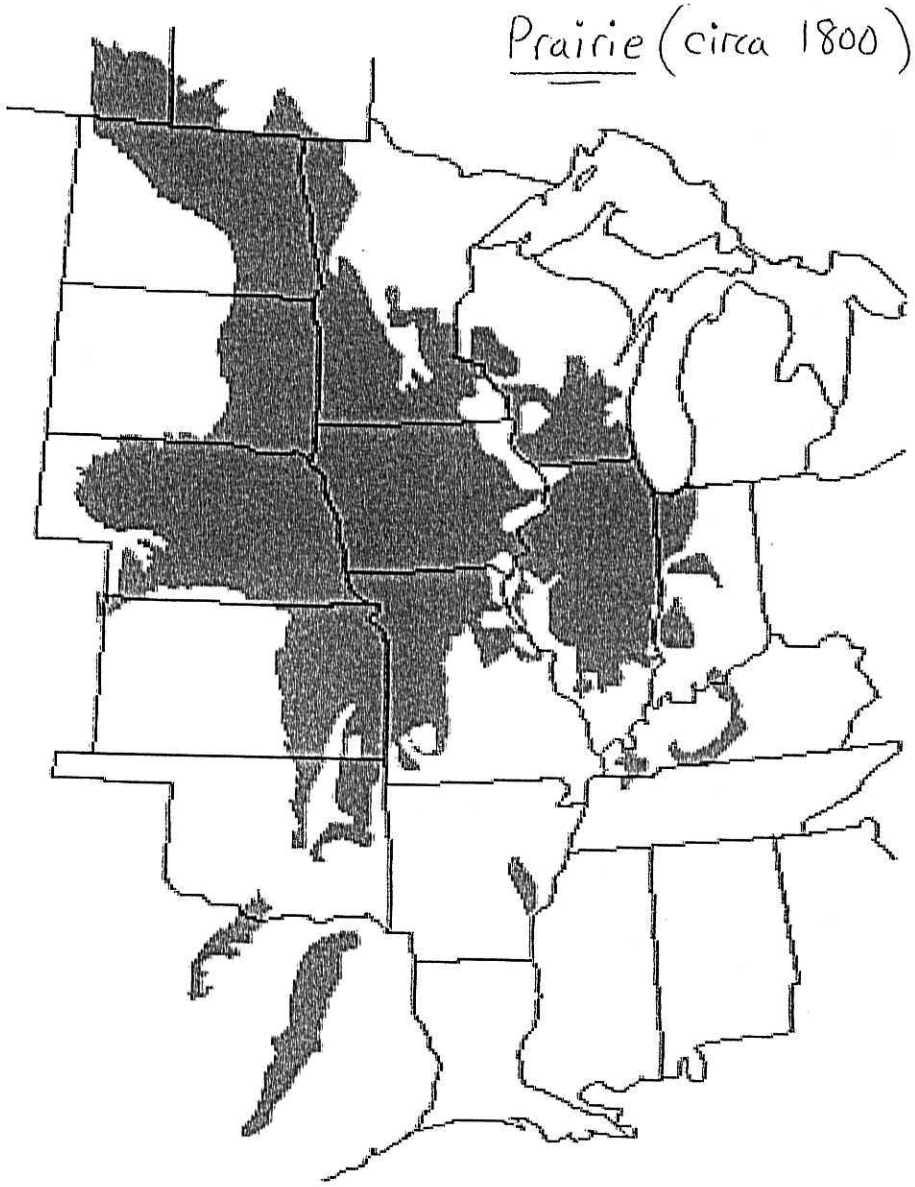
Lawns – those myopically obsessive (and evil) urban, suburban, and increasingly rural monoculture eyesores that displace native ecosystems at a rate between 5,000 and 385,000 acres per day* in favor of sterile, chemically-filled, artificial environments bloated with a tremendous European influence that provide no benefits over the long term; no food, no clean water, no wildlife habitat, and no foundation for preserving our once rich natural heritage. And there's the unbearable ubiquitousness of mowing associated with such a useless cultural practice, which creates a ridiculous amount of noise pollution, air and water pollution, and a bustling busyness that destroys many peaceful Saturday mornings. The American lawn is the epitome of unsustainability.
**The discrepancy is due to expenses. It would be extremely expensive to taxpayers and institutions to obtain the satellite imagery needed to perform a detailed analysis as to how much lawn there really is. Also keep in mind that a lot of lawns are "hidden" under the canopies of trees and urban forests, so those numbers I've quoted are conservative at best. Click here for a more thorough explanation. I would also guess those numbers are taken from urban sprawl rates, which varies year to year, decade to decade, etc.*

As one internet commenter named Carrie eloquently said, "as a nation, we have far too much lawn doing far too little for us."

How much lawn is too much? *41 million acres*. That figure makes lawn the most widespread plant *under irrigation* in the contiguous US. Three times more acreage is covered in irrigated lawn than in irrigated corn, and that's a conservative estimate. All of that once precious water used on those 41 million acres of ridiculous, non-native turfgrass to keep it unnaturally green – how can people be so blind?

Lawns, along with row-crop farms, "improved" grazing pastures, and urbanization, are some of the biggest negative land conversions of native landscapes, and are direct contributors to the destruction of wildlife and native plant habitats throughout the world. As native landscapes disappear, wildlife disappear, and important ecological processes that insure outcomes such as clean drinking water, climate change buffers, and flood control also disappear. The future of mankind depends heavily upon the health of native landscapes.

Prairies matter because of their immense root systems; dense, sprawling, complex biological systems that store one third of the world's carbon and subsequently clean our future water as it precipitates from moisture-laden clouds onto diverse plant communities, and filters down through the mass of litter, roots, soil organisms, and soil horizons. Water quality *always* follows soil carbon levels, and prairies are the best soil carbon factories in the world. Lawns do not compare and never will.



"The American lawn now represents a serious civic problem. That the space devoted to it continues to grow—and that more and more water and chemicals and fertilizer are devoted to its upkeep—doesn't prove that we care so much as that we are careless."
– Elizabeth Kolbert

The carelessness of the American people's obsessive compulsion for such silly and lowly turfgrass goals extends far beyond the failure they are set up for in regards to their quest for the unsustainable and unattainable "perfect lawn". As noted before, lawns are suicidal – we are poisoning ourselves, our children, and our water for something that is wholly obtuse and unneeded. Why not be productive and grow a garden instead? A garden, prairie, woodland, forest or xeriscape are far better than the high-maintenance and pervasive European-style lawns.

To sum up the nearsightedness of lawn lovers, here's a quote attributed to Mark Twain: "You can't depend on your judgement when your imagination is out of focus."

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- Every day more than 5,000 acres of land are converted to lawns in the U.S. By some estimates, this figure exceeds 385,000 acres.
- Lawns currently cover more than 41 million acres, the most irrigated graminoid plant in the U.S.
- Americans apply over 30,000 tons of pesticides to their yards every year.
- Of the 30 most used lawn pesticides, 17 are routinely detected in groundwater.
- The National Cancer Institute finds that children in households that have lawn treated with pesticides have a 6.5 times greater risk of developing leukemia.
- American lawns require 200 gallons of fresh water per person per day to maintain and keep green. *People in Developing Countries would kill for that amount of water, and here we are carelessly using it on silly turfgrass.*
- Of 30 commonly used lawn pesticides, 19 are linked with cancer or carcinogenicity, 13 are linked with birth defects, 21 with reproductive effects, 26 with liver or kidney damage, 15 with neurotoxicity, and 11 with disruption of the endocrine (hormonal) system.
- Of those same pesticides, 17 are detected in groundwater, 23 have the ability to leach into drinking water sources, 24 are toxic to fish and other aquatic organisms vital to our ecosystems, 11 are toxic to bees, and 16 are toxic to birds.

"What the Prairie Teaches Us"

The prairie, although plain, inspires awe. It teaches us that grandeur can be wide as well as tall.

Young prairie plants put down deep roots first; only when these have been established do the plants invest much energy in growth above ground. They teach us that the work that matters doesn't always show.

Diversity makes the prairie resilient. One hundred acres of prairie may support three thousand species of insects alone, each of them poised to exploit – often beneficially – certain plants, microclimates, soils, weather conditions, and seasons. This exuberance equips the prairie to make the most of every opportunity, to meet every natural contingency. The prairie teaches us to see our own living arrangements as stingy and to understand that this miserliness is why they so frequently fall short of our expectations.

The prairie is a community. It is not just a landscape or the name of an area on a map, but a dynamic alliance of living plants, animals, birds, insects, reptiles, and microorganisms, all depending upon each other. When too few of them remain, their community loses vitality and they perish together. The prairie teaches us that our strength is in our neighbors. The way to destroy a prairie is to cut it up into tiny pieces, spaced so that they have no communication.

The prairie is patient. When drought sets in, as it inevitably does, prairie grasses bide their time. They do not flower without the nourishment to make good seed. Instead, they save their resources for another year when the rains have fallen, the seeds promise to be fat, and the earth is moist and ready to receive them. The prairie teaches us to save our energies for the opportune moment.

The prairie grows richer as it ages. Our own horticultural practices eventually deplete the soils. The topsoil washes or blows away; without additives, fertility dwindles. But the soils beneath the protective cover of prairie sod deepen over time; their tilth improves as burrowing animals and insects plow organic matter into them; fires recycle nutrients; deep roots bring up trace elements from the substrate; abundant legumes and microorganisms help to keep it fertile. The prairie was so effective at this work, that more than a century after it was broken, it remains the richest agricultural region in the world. The prairie teaches us how to be competitive without also being destructive.

The prairie is tolerant. There are thousands of species of living things on the prairie, but few of them are natives. The prairie has welcomed strangers of every kind and has borrowed ideas from all of its neighboring communities. In doing so, it has discovered how to flourish in a harsh place. The prairie teaches us to see the virtue of ideas not our own and the possibilities that newcomers bring.

Health Effects of 30 Commonly Used Pesticides

	Cancer	Endocrine Disruption	Reproductive Effects	Neurotoxicity	Kidney/Liver Damage	Sensitizer/ Irritant	Birth Defects
HERBICIDES							
2,4-D*	X[3]	X[10]	X[7]	X[6]	X[8]	X[1,4]	X[11]
Benfluralin					X[1]	X[1]	
Bensulide				X[2]	X[1]	X[2]	
Clopyralid			X[7]			X[2]	X[7]
Dicamba*			X[1]	X[2]	X[2]	X[1]	X[1]
Diquat Dibromide			X[12]		X[11]	X[1]	
Dithiopyr					X[1]	X[1]	
Fluazipop-p-butyl			X[1]		X[1]		X[1]
Glyphosate*	X[12]	X[8]	X[1]		X[6]	X[1]	
Imazapyr					X[7]	X[2]	
Isoxaben	X[3]				X[2]		
MCPA		X[5]	X[2]	X[2]	X[11]	X[3]	
Mecroprop (MCPP)*	Possible[9]	X[8]	X[2]	X[4]	X[9]	X[1]	X[2]
Pelargonic Acid*						X[1]	
Pendimethalin*	Possible[9]	X[8]	X[1]			X[2]	
Triclopyr			X[7]		X[8]	X[1]	X[7]
Trifluralin*	Possible[9]	X[5]	X[1]		X[2]	X[1]	
INSECTICIDES							
Acephate	Possible[3]	X[6]	X[11]	X[9]		X[2]	
Bifenthrin*†	Possible[3]	Suspected[6,10]		X[8]		X[1]	X[9]
Carbaryl	X[3]	X[10]	X[8]	X[1]	X[11]	X[11]	X[7]
Fipronil	Possible[3]	X[6]	X[8]	X[8]	X[8]	X[8]	
Imidacloprid †			X[7]		X[2]		X[7]
Malathion*	Possible[9]	X[10]	X[11]	X[2]	X[2]	X[2]	X[2]
Permethrin*†	X[3]	Suspected[6,10]	X[1,7]	X[9,7]	X[9]	X[1]	
Trichlorfon	X[3]	X[6]	X[11]	X[2]	X[2]		X[2]
FUNGICIDES							
Azoxystrobin					X[2]	X[2]	
Myclobutanil		Probable[6]	X[2]		X[2]		
Propiconazole	Possible[7]	X[6]	X[2]		X[1]	X[1]	
Sulfur						X[1]	
Thiophanate methyl	X[3]	X[1]	X[1]	Suspected[1]	X[1]	X[2]	X[1]
Ziram	Suggestive[3]	Suspected[5]		X[2]	X[2]	X[2]	
Totals:	16	17	21	14	25	26	12

The prairie turns adversity into advantage. Fires were frequent on the unplowed prairies. The prairie so completely adapted to this fact that it now requires fire for its health. Regular burning discourages weedy competitors, releases nutrients captured in leaves and stems, reduces thatch that would otherwise become a stifling mulch, stimulates cloning in grasses, and encourages the growth of legumes, which capture nitrogen from the air and make it available to the whole prairie community. The prairie teaches us to consider the uses that may be made of our setbacks.

The prairie is cosmopolitan. On the wings of winds and of birds, in the migrations of animals and insects, down the waters of streams and rivers come the messages, mainly contained in genetic codes, that sustain the prairie. Its storms swoop out of the Arctic or sweep up from the Gulf; many of its songbirds are familiar with the tropical rainforests; its monarch butterflies winter in the highlands of Mexico; its ducks vacation on seacoasts and in desert oases; its parasites hitchhike upon all of them. We think we have discovered the global village, but the prairie knew of it millennia ago.

The prairie is bountifully utilitarian. But it is lovely too, in a hundred thousand ways and in a million details, many of them so finely wrought that one must drop to one's knees to appreciate them. This is what, over all else, the prairie teaches us: there need be no contradiction between utility and beauty.

80% of a prairie's biomass is below ground, which is a part of the reason why prairies are the greatest soil carbon factories in the world. Those roots break up compacted soil, and as a portion of those roots die each year, they add organic matter and decompose into carbon, further enriching the soil; all of this is done without deadly pesticides or equally deadly petrochemical fertilizers.

Other common lawn grasses are Bermudagrass (*Cynodon dactylon*), Zoysiagrass (*Zoysia* spp.), and Bahiagrass (*Paspalum notatum*), to name a few. None of those are native either, originating from Africa, Japan, and Brazil, respectively.

Kentucky Bluegrass did not originate in North America (a handful of sources say otherwise), so why are we planting it and other weedy non-native grasses? Is it out of fear of nature? Is it out of ignorance of the true beauty of natural ecosystems? (Homeowner associations and neighborhood zoning laws are famous for that). What is so wrong with native plants that we bring in non-native junk from other continents? It's because most people are impatient when it comes to plants, and they want something that grows fast, is green, stays green, and can be kept as flat as a table top – something the Scotts Company has successfully brainwashed millions of people into believing they can achieve via weekly and noisy toil, though not without taking a chunk out of their paychecks and making them do a whole lot of work with nothing to show for it. How vain, futile, and suicidal.

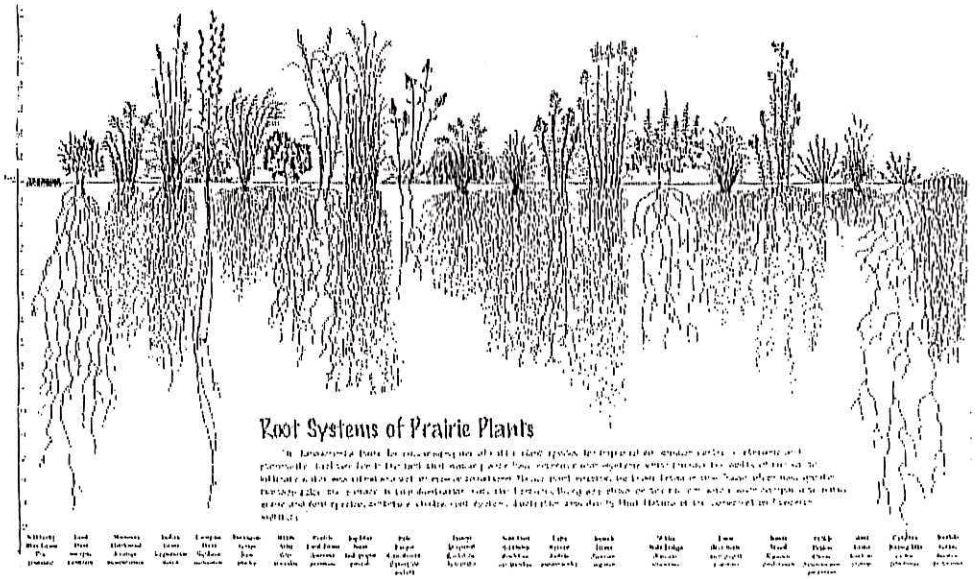

Illustration by Heidi Natura, 1995, of Living Habitats.